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on: July 23, 2007

by: Joanne K. Kelly

Attorney Docket No. 0241us320

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Erik Karrer, *et al.*

Application No: 10/686,945

Filed: October 16, 2003

For: ANTIBODY DIVERSITY GENERATION

Examiner: DeJong, Eric S.

Art Unit: 1631

Confirmation No: 4598

INFORMATION DISCLOSURE
STATEMENT UNDER
37 CFR § 1.97 and § 1.98

Commissioner for Patents
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Sir:

The references cited on the attached Form PTO SB-08 and Form PTO-892 are being called to the attention of the Examiner to make of record references cited in parent application USSN 09/704,469 filed November 1, 2000. Pursuant to 37 CFR § 1.98(d), copies of references cited in parent application USSN 09/704,469 are not provided. However the Applicants will gladly provide additional copies of any references requested by the Examiner.

It is respectfully requested that the cited information on the attached Form PTO SB-08 and Form PTO-892 for application USSN 09/704,469 be expressly considered during the prosecution of the instant application, and that references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

This IDS is being filed after the mailing date of the first Office Action and more than three months after the filing date, but prior to the Notice of Allowance or Final Office Action. Please deduct \$180.00, pursuant to 37 CFR §1.17(p), from the undersigned's Deposit Account No. 50-0990. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

July 23 2007

Respectfully submitted,



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COPY FROM PARENT

Substitute for form 1449A-B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>	Complete if Known Application Number <u>09704469 10/886,945</u> Filing Date <u>November 1, 2000 10/16/03</u> First Named Inventor <u>Erik Karrer</u> Group Art Unit <u>Unassigned 1631</u> Examiner Name <u>Unassigned DeJong</u> Attorney Docket Number <u>02-102020US 0241 US 320</u>
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U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
	AA	09/407,800		Maxygen, Inc.	09-28-1999	
	AB	09/408,392		Maxygen, Inc.	09-28-1999	
	AC	09/408,393		Maxygen, Inc.	09-28-1999	
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	AF	4,634,664		Engelman et al.	01-06-1987	
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	AH	5,756,316		Schellenberger	05-26-1998	
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	AJ	5,824,485		Thompson et al.	10-20-1998	

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Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
	AK	WO	00/00632	A1	Phylos, Inc	01-06-2000		
	AL	WO	00/09676	A1	Proteus	02-24-2000		
	AM	WO	00/42560	A2	Maxygen, Inc.	07-20-2000		
	AN	WO	00/42560	A3	Maxygen, Inc.	07-20-2000		
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	AS	WO	00/42559	A1	Maxygen, Inc.	07-20-2000		
	AT	WO	95/22625	A1	Stemmer	08-24-1995		
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	AW	WO	98/42727	A1	SRI International	10-01-1998		

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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

COPY FROM PARENT

Substitute for form 1449A-B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)	Complete if Known	
	Application Number	09/704469 10/686,945
	Filing Date	November 1, 2000 10/16/03
	First Named Inventor	Erik Karrer
	Group Art Unit	Unassigned 1631
	Examiner Name	Unassigned DeJong
	Attorney Docket Number	02-102020US 0241 us 320

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	AX	Balint and Larrick (1993) "Antibody Engineering by Parsimonious Mutagenesis." <i>Gene</i> 137:109-118	
	AY	Chothia and Lesk (1987) "Canonical Structures for the Hypervariable Regions of Immunoglobulins." <i>J Mol Biol.</i> 196:901-917	
	AZ	Giver et al. (1998) "Combinatorial protein design by in vitro recombination." <i>Current Opinion in Chemical Biology</i> 2(3): 335-338.	
	BA	Gram et al. (1992) "In Vitro selection and affinity maturation of antibodies from a naïve combinatorial immunoglobulin library." <i>PNAS</i> 89:3576-3580	
	BB	Hawkins et al. (1992) "Selection of phage antibodies by binding affinity. Mimicking affinity maturation." <i>J. Mol Biol.</i> 226:889-896	
	BC	Hock (1997) "Antibodies for immunosensors: a review." <i>Analytica Chimica Acta</i> 347:177-186	
	BD	Huse et al. (1989) "Generation of a Large Combinational Library of the Immunoglobulin Repertoire in Phage Lambda." <i>Science</i> 246:1275-1281	
	BE	Jirholt et al. (1998) "Exploiting sequence space: shuffling in vivo formed complementarily determining regions into a master framework." <i>Gene</i> 215:471-476	
	BF	Litman et al. (1993) "Phylogenetic diversification on immunoglobulin genes and the antibody repertoire." <i>Mol Biol Evol</i> 10:60-72	
	BG	Low et al. (1996) "Mimicking somatic hypermutation: affinity maturation of antibodies displayed on bacteriophage using a bacterial mutator strain." <i>J. Mol Biol.</i> 260:359-368	
	BH	Marks et al. (1991) "By-passing immunization. Human antibodies from V-gene libraries displayed on phage." <i>J. Mol Biol.</i> 222:581-597	
	BI	Marks et al. (1992) "By-Passing Immunization: Building High Affinity Human Antibodies by Chain Shuffling." <i>Biotechniques</i> 10:779-782	
	BJ	Schier and Marks (1996) "Efficient in vitro affinity maturation of phage antibodies using BIAcore guided selections." <i>Hum Antibodies Hybridomas</i> 7:95-105	
	BK	Stemmer et al. (1993) "Selection of an Active Single Chain Fv Antibody From a Protein Linker Library Prepared by Enzymatic Inverse PCR." <i>Biotechniques</i> 14(2):256-265	
	BL	Stemmer et al. (1995) "Single-step assembly of a gene and entire plasmid from large numbers of oligodeoxy-ribonucleotides." <i>Gene</i> 164:49-53	
	BM	Stemmer et al. (1997) "Molecular evolution of genes and pathways by DNA shuffling." <i>FASEB J.</i> 11:A1124	
	BN	Ward et al. (1989) "Binding activities of a repertoire of single immunoglobulin variable domains secreted from Escherichia coli." <i>Nature</i> 341:544-546	

Examiner Signature	Date Considered
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		First Named Inventor	Erik Karrer
		Group Art Unit	Unassigned 1631
		Examiner Name	Unassigned DeJong
		Attorney Docket Number	02-102020US 0241us 320
BO	Winter et al. (1994) "Making Antibodies by Phage Display Technology." <i>Annu Rev. Immunol</i> 12:433-455		
BP	Wu et al. (1970) "An analysis of the sequences of the variable regions of bence jones proteins and myeloma light chains and their implications for anti-body complementarity." <i>J. Exo Med.</i> 132:211-250		

Examiner Signature		Date Considered	
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Notice of References Cited

Application/Control No.

09/704,469- 10/686,945

Applicant(s)/Patent Under
Reexamination
KARRER ET AL.

Examiner

Larry R. Helms DeJong

Art Unit

1642 1631

Page 1 of 1

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*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-			
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
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	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Daugherty et al NAR 19:2471, 1991
	V	Rader et al PNAS 95:8910-15, 1998
	W	Rudikoff et al PNAS 79:1979, 1982
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.